

## **REMARKS**

Claims 1-15 are now present in the application. Claims 1, 5 and 8 have been amended and claims 9-15 have been added. Claims 1 and 5 are independent. Reconsideration of this application, as amended, is respectfully requested.

### **Office Action Summary and Allowable Subject Matter**

In the Examiner's Office Action dated September 30, 2003, the Examiner has not mentioned claims 6-8 in the Office Action Summary or the body of the Office Action. Claims 6-8 were added by the Amendment dated February 6, 2003.

To the Extent the Examiner has considered claims 6-8, it is believed that these claims are considered by the Examiner to include allowable subject matter. However, for the below reasons, Applicants respectfully submit that independent claims 1 and 5 are in condition for allowance. Accordingly, claims 6-8 have not been rewritten in independent form at this time.

To the Extent that the Examiner has not considered claims 6-8 or does not believe that claims 6-8 are directed to allowable subject matter, it is requested that the Examiner clarify this in the next Office Communication. It is also noted that it would not be appropriate to make the next Office Action final if the Examiner rejects claims 6-8 in view of the prior art. Claims 6-8 have been represented by the present amendment having the same scope as presented in the Amendment dated February 6, 2003.

### **Status of the Drawings**

In the Examiner's Office Actions dated November 6, 2002 and September 30, 2003, the Examiner has not provided any indication as to the status of the drawings. As the Examiner will note, the present application was filed with five (5) sheets of formal drawings, as indicated on the transmittal dated December 29, 2000. **It is respectfully requested that the Examiner provide an indication as to the status of the drawings in the next Office Communication so that Applicants can make any necessary drawing corrections in a timely manner.**

### **Rejection Under 35 U.S.C. § 103**

Claims 1-5 stand rejected under 35 U.S.C. § 103 as being unpatentable over the Applicant's Admitted Prior Art (AAPA) in view of Shin, U.S. Patent No. 6,307,531. This rejection is respectfully traversed.

At the outset, it is respectfully submitted that the Shin reference relied on by the Examiner is not an appropriate reference under 35 U.S.C. § 103(a). The present application was filed on December 29, 2000 and the Shin reference issued on October 23, 2001. In view of this the Shin reference is only available under 35 U.S.C. § 102(e) as of its filing date.

Referring to 35 U.S.C. § 103(c), it is not appropriate to rely on a reference that "qualifies as prior art only under one or more of subsections (e), (f), and (g) of section 102 of this title ... where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person." In the

present situation, the present application and the Shin reference are assigned to LG. Philips LCD, Co., Ltd. In addition, the present application and the Shin reference were owned and/or subject to an obligation of assignment at the time the present invention was made to LG. Philips LCD Co., Ltd.

In view of the above, the Shin patent is not available as a reference under 35 U.S.C. § 103(a) due to the limitations of 35 U.S.C. § 103(c). Accordingly, the Examiner's rejection is improper and should be withdrawn.

For the above reasons, the Examiner's rejection of claims 1-5 is improper, since the Examiner relies on the Shin Patent for a rejection of each of these claims. However, the following comments are offered for the Examiner's consideration with regard to the Examiner's reliance on the AAPA.

The present invention is directed to a liquid crystal display device, wherein independent claim 1 is directed to a quad type liquid crystal display device and independent claim 5 is directed to a liquid crystal display panel. Independent claim 1 recites a combination of elements including "a plurality of data drive integrated circuits having 'm' (m is a natural number) number of channels, wherein  $(3n-1)$ th (n is a natural number) channels for each data drive integrated circuit are floating." Independent claim 5 recites a combination of elements including "a plurality of drive integrated circuits for driving the panel, each of said plurality of drive integrated circuits having 'm' (m is a natural number) number of channels and 'n' (n is a natural number) number of floating channels" and "wherein  $n < m$ ." Applicants respectfully submit that

the AAPA is insufficient to teach or suggest the present invention as recited in independent claims 1 and 5.

Referring to page 3, lines 5-9 of the Examiner's Office Action, the Examiner recognizes that the AAPA fails to disclose the recitation "wherein  $(3n-1)$ th ( $n$  is a natural number) channels for each data drive integrated circuit are floating" in claim 1 of the present invention or the recitation "each film having  $(m-n)$  number of lines, wherein  $n < m$ " in claim 5 of the present invention. However, the Examiner states "it would have been obvious to one of ordinary skill in the art to spread out the floating channels or the non-use channels over the entire drive IC because it would provide a good balance in preventing the waste of liquid crystal inserted between the substrates." Applicants respectfully submit that independent claims 1 and 5 do not only recite that the floating channels are "spread out" as indicated by the Examiner. In view of this, Applicants submit that the Examiner's rationale is insufficient to modify the AAPA to arrive at the presently claimed invention.

First, the Examiner has not established a *prima facie* case of obviousness. In order to establish a *prima facie* case of obviousness, the Examiner must provide some suggestion or motivation in the prior art in order to modify a particular prior art teaching to arrive at the presently claimed invention. The Examiner has not provided any suggestion in the art to "spread out" the channels as stated by the Examiner. Applicants are unaware of any teaching in the prior art that would motivate one having ordinary skill in the art to "spread out" floating channels as indicated by the Examiner. The only suggestion to spread out floating channels appears in

Applicants' own disclosure. Accordingly, the Examiner's rejection is improper and should be withdrawn. The Examiner is requested to provide a teaching in the prior art of spreading out floating channels or withdraw the rejection.

Second, independent claims 1 and 5 require that "each" of the drive integrated circuits have floating channels. Claim 1 specifically recites "each data drive integrated circuit are floating," while independent claim 5 recites "each film having (m-n) number of lines, where  $n < m$ ." Since "each" film is recited as having (m-n) number of lines, each film and therefore each drive integrated circuit includes floating channels. In view of this, merely spreading out the floating channels is insufficient to arrive at the present invention. Referring to page 5, lines 3-5 of the present specification, it is stated that "each of the outmost data drive ICS 115c and 115d has 64 number of dummy channels." In view of this, the middle data drive IC in Figure 5 of the present invention does not have any dummy channels. The AAPA of Figure 5 only discloses having dummy channels in the outermost drive integrated circuits. In view of this, the AAPA fails to disclose each of the drive integrated circuits having floating channels as recited in independent claims 1 and 5 of the present invention.

Since the presently claimed invention requires that each drive integrated circuit includes floating channels, it is requested that the Examiner provide a suggestion in the prior art to include floating channels in more than the endmost drive integrated circuits as disclosed in the AAPA. If the Examiner cannot provide such a suggestion, it is requested that the Examiner withdraw the rejection in view of the AAPA.

Third, with particular reference to independent claim 1 of the present invention, this claim recites that “(3n-1)th” channels for “each” data drive integrated circuit are floating. In view of this, not only are floating channels provided in each drive integrated circuit, it is particularly recited that “(3n-1)th channels are floating. Such a recitation is certainly not met by merely “spreading out” floating channels as asserted by the Examiner. In view of this, it is requested that the Examiner also provide a teaching in the prior art of having “(3n-1)th channels be floating or withdraw the rejection in view of the AAPA.

With regard to dependent claims 2-4, Applicants respectfully submit that these claims are allowable due to their dependence on independent claim 1, as well as due to the additional recitations in these claims.

In view of the above remarks, Applicants respectfully submit that claims 1-5 clearly define the present invention over the references relied on by the Examiner. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103 are respectfully requested.

#### **Additional Claims**

Additional claims 9-15 have also been added for the Examiner's consideration. Applicants respectfully submit that additional claims 9-15 are allowable due to their respective dependence on allowable independent claims 1 and 5, as well as due to the additional recitations in these claims.

Favorable consideration and allowance of additional claims 9-13 are respectfully requested.

### CONCLUSION

Since the remaining references cited by the Examiner have not been utilized to reject the claims, but merely to show the state-of-the-art, no further comments are deemed necessary with respect thereto.

All the stated grounds of rejection have been properly traversed and/or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently pending rejections and that they be withdrawn.

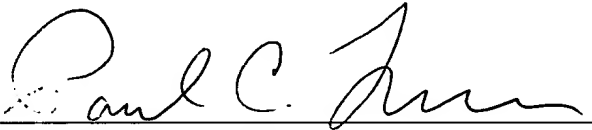
It is believed that a full and complete response has been made to the Office Action, and that as such, the Examiner is respectfully requested to send the application to Issue.

In the event there are any matters remaining in this application, the Examiner is invited to contact Paul C. Lewis, Registration No. 43,368 at (703) 205-8000 in the Washington, D.C. area.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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